Self-directed learning in nurse education: a review of the literature

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Rationale. Self-directed learning is essential in assisting nurses to meet the challenges presented in today's health care environment. Nurse educators have an important role to play in assisting nurses to acquire the skills for self-directed learning, and to do this they need to understand the concept of self-directed learning.
Aim. The aim of this review is to explore the concept of self-directed learning and its use in nurse education.
Methods. A review of the literature was conducted using CINAHL, Medline and other databases and the keywords 'self-directed learning', 'student nurses', 'classroom', 'nursing education' and 'adult education'.
Findings. The concept of self-directed learning is based on the principles of adult education and can take many different formats. Self-directed learning has many benefits. However, acquiring the necessary skills is dependent on a students' preference and readiness for self-directed learning and nurse educators' implementation of the concept. In implementing self-directed learning, nurse educators become facilitators of learning and require ongoing staff development. Not all students are self-directed and a variety of teaching methods should be used in curricula.
Conclusions. A consensus definition of the concept of lifelong learning does not exist, and students and teachers may have different perspectives on it. Mature students may be more self-directing than school-leavers, and learning styles and readiness to learn need to be assessed when judging the appropriateness of using self-directed learning approaches. However, there are many potential benefits, including increased confidence, autonomy, motivation and preparation for lifelong learning.

Keywords: self-directed learning, nurse education, learning style preference, readiness, facilitation

Introduction

Nurses operate in a complex health care environment where social, technological and medical changes present them with challenges, and nurse education has a vital role to play in ensuring that they can adapt and respond to these challenges (Majumdar 1999). Traditionally didactic methods of teaching have predominated in nurse education. However, it is no longer satisfactory to teach in this manner (Nolan & Nolan 1997a), and current nursing programmes increasingly place an emphasis on adult education, including

self-directed learning. It is beneficial to provide students with the skills to seek, analyse and utilize information effectively, and nurse educators have a role to play in aiding nurses to acquire these skills (Lunyk-Child *et al.* 2001). Nurses unable to direct their own learning will not have the skills necessary to meet the changes in modern health care. In order to facilitate the acquisition of the skills for self-directed learning, nurse educators need to familiarize themselves with the concept. This review aims to explore the concept of self-directed learning and its use in nurse education.

Method

A computer search was conducted using the CINAHL, MEDLINE and combined RCN/BNI/Worldwide Nursing Information databases. The following keywords were used: 'self-directed learning', 'student nurses', 'classroom', 'nursing education' and 'adult education'. Abstracts from citations were read for suitability, which resulted in the identification of only 24 published research reports within the nursing field. Bibliographies of all retrieved articles were examined for additional studies. The majority of the literature emanated from the United States of America (USA), Canada and Australia.

It is important to acknowledge that the majority of nursing research reports in relation to self-directed learning date from the 1980s. However, since then nurse education has undergone considerable change and nurse educators today increasingly seek to incorporate principles of adult education and student-centred learning in nursing curricula.

Findings

The literature reviewed will be presented under the following headings: definition of self-directed learning, nature of self-directed learning, learning styles and ability to be self-directed, maturity and stage of education, readiness for self-directed learning, facilitating self-directed learning and benefits of self-directed learning.

Definition of self-directed learning

The definition of self-directed learning varies throughout the literature. Self-directed learning is customarily contrasted with teacher-directed learning and is exemplified by the fact that the learner decides what, how, where and when to learn (Race 1990). The most common definition is that of Knowles (1975) as follows:

a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies and evaluating learning outcomes (p. 18).

Iwasiw (1987), developing the work of Knowles (1975), outlines five characteristics of self-directed learning and suggests that students are responsible for:

- identifying their own learning needs,
- determining their learning objectives,
- deciding how to evaluate learning outcomes,
- identifying and pursuing learning resources and strategies,
- evaluating the end product of learning.

In essence, Iwasiw (1987) considers self-directed learning to be a form of study in which individuals have responsibility for planning, implementing and evaluating their own work.

Hammond and Collins (1991) criticize Knowles' definition as placing insufficient emphasis on developing critical awareness and encouraging social action. Despite this, Knowles' definition appears to form the basis of many others. For example, Spencer and Jordan (1999) define self-directed learning as:

when students take the initiative for their own learning, diagnosing needs, formulating goals, identifying resources, implementing appropriate activities and evaluating outcomes (p. 1281).

D'A Slevin and Lavery (1991) contend that definitions of self-directed learning are ambiguous and that the concept means different things to different people. However, the key feature of definitions in the literature is that they describe a process of learning based on the principles of adult education (Nolan & Nolan 1997a). Furthermore, what also appears common to most definitions is the notion of some personal control by the learner over the planning and management of the learning.

Nature of self-directed learning

Research on self-directed learning stems from the seminal work of Tough (1979). He draws attention to individuals' intentional efforts to learn, and suggests that learners takes the initiative to gain knowledge or skills or to produce some change in themselves. According to Tough (1979), whose work relates to the adult population in general, 90% of adults engage in self-learning projects.

Studies have been conducted to explore the amount of time nurses spend on self-directed learning. In one American study, involving structured interviews based on Tough's (1979) interview schedule, Emblen and Gray (1990) investigated the self-directed learning practices of 80 Registered Nurses. The findings indicate that they spent an average of 313 hours per year on independent or self-directed learning. Of these, 217 hours were attributed to professional topics and 96 hours to non-professional topics. These findings may not be representative of all nurses, as the sample size was small. Furthermore, for the purposes of the study subjects were asked to recall their learning experiences, and differences in memory may have affected the data.

In relation to the total hours spent on self-directed learning, Dixon (1991), in another American study, obtained

results similar to those of Emblen and Gray (1990). Ninety-nine Registered Nurses completed a questionnaire about learning activities, and the results indicated that nurses spent on average 309 hours per year on self-directed learning. However, only 152 of those hours related to professional learning. This is significantly lower than in Emblen and Gray's (1990) study, but Dixon (1991) offers no explanation for this. The authors of both studies conclude that the amount of time spent on self-directed learning is small and suggest that this may be due to the fact that many respondents were married and may have had commitments in the home. Furthermore, both of these studies involved Registered Nurses, whose participation in nurse education may differ considerably from that of student nurses.

While it is clear from both studies that nurses actively engage in self-directed learning, neither identified what activities constituted self-directed learning. Despite this, the literature indicates that self-directed learning can take multiple forms. The synonyms found for this type of learning include reading, informal discussions, independent study, self-instruction packages, guided study, group work, learning contracts, computer-assisted learning, distance education and teleconferencing (Hamilton & Gregor 1986, Iwasiw 1987, Weinberg & Stone-Griffith 1992).

The use of problem-based learning has also been linked with student self-direction (Hewitt-Taylor 2002). Literature from the medical arena indicates that one of the goals of problem-based learning is the development of attitudes and skills that will foster self-direction and lifelong learning (Holen 2000, Schmidt 2000). Indeed, Chapagain et al. (1998) conducted a questionnaire survey of 26 medical students to evaluate their perceptions of a problem-based learning package. The results indicated that problem-based learning facilitated the development of self-directed learning. While the findings of this study are positive for those using problem-based learning, caution is urged as the small sample size militates against generalization of the findings. Also the subjects were medical rather than nursing students. The development of self-directed learning skills in problem-based learning may result from the learner being viewed as an active participant who is expected to engage in in-depth learning activities based on an analysis of the problem at hand (Charlin et al. 1998).

It has been suggested by Iwasiw (1987) that the multiple formats can be viewed on a continuum according to the amount of formal structure involved. This is consistent with the work of Knowles (1975, 1990), who described a continuum of learning with teacher directed learning at one end and self-directed learning at the other. Activities can be placed on the continuum depending on the amount of control

the learner has over the learning process (Weinberg & Stone-Griffith 1992, Fisher et al. 2001). The exact degree of self-directed learning will depend on the individual's learning style, and preference and readiness for self-directed learning (Rolfe 1993).

Learning styles and ability to be self-directed

With the complexity and degree of change in practice today, nurses should be encouraged to take responsibility for their own learning (Majumdar 1999). However, even when adults are willing to assume responsibility for their own learning, they will have different aptitudes for certain kinds of learning (Russell 1990). According to Knowles (1975, 1990), all adults are self-directed, but this is disputed by Darbyshire (1993), who suggests that some people are more self-directed than others. Several studies have been conducted to explore learning style preference (Harvey & Vaughan 1990, Burnard & Morrison 1992, Turunen et al. 1997). However, only a few studies have attempted to relate learning style preference and self-directed learning (O'Kell 1988, Prociuk 1990, Linares 1999).

McCarthy (1995), in a literature review of the research on teaching and learning methods in nurse education, suggests that many nurses and nursing students prefer direct teacher-structured experiences, although they have a positive attitude towards most teaching methods. Burnard (1991) also contends that students are not keen on student-centred approaches and prefer more structure. This has been supported by an exploratory study carried out in the United Kingdom (UK) by Burnard and Morrison (1992) to examine how nurse educators and student nurses perceived the teaching activities that they were using or experiencing. Questionnaires were distributed to a convenience sample of 110 students and 47 lecturers, and the findings showed that students preferred a more teacher-centred approach, while lecturers favoured student-centred learning. This suggests that preference for teaching and learning methods is divergent among students and lecturers, and this has implications for nurse educators, who must take account of students' preferred learning styles when planning suitable methods for teaching (Herrick & Carlson 1998). Burnard and Morrison (1992) suggest that not all students may want or be able to be independent, again refuting the claim by Knowles (1975, 1990) that all adults are self-directed.

In contrast to the findings of Burnard and Morrison (1992), other researchers indicate that students prefer student-centred approaches (Harvey & Vaughan 1990, Turunen et al. 1997). Harvey and Vaughan (1990) investigated nursing students' attitudes towards different teaching

and learning methods. The Osgood Semantic Differential Scale, consisting of a number of adjective pairs with opposite meanings, was administered to 203 student nurses from nine schools of nursing in the UK. Teaching methods favoured by students were those that were student-centred and involved groups. Preference for student-centred approaches was also identified by Turunen *et al.* (1997) in a quantitative study to investigate Finnish nursing and social work students' orientations to their studies. A questionnaire consisting of close-ended questions and a 21-item scale developed for the study was administered to 68 nursing and 71 social work students. Most students did not like teacher-centred learning activities. While all students valued student-centred approaches, it is interesting to note that nursing students preferred more teacher-centred methods than social work students. This suggests some support for Burnard and Morrison's (1992) findings that students prefer a teacher-centred approach to teaching, while tutors prefer a student-centred approach.

The suggestion that students prefer student-centred approaches is supported by an American study by Linares (1999) carried out to determine if students and teachers in nursing and allied health disciplines demonstrate a predominant learning style. Marshall and Merritt's (1986) learning style questionnaire and Guglielmino's (1977) Self-Directed Learning Readiness Scale (SDLRS) were administered to 599 nursing and allied health students and 30 faculty members. Self-directed learning readiness scores indicated that all respondents were self-directed, with teachers being more self-directed than students. This again suggests a dichotomy in understanding of self-directed learning between the groups.

Garrison (1992) contends that self-direction should be seen as a collaborative process between teacher and learner. It is therefore necessary to identify what students and teachers understand by self-directed learning. Hewitt-Taylor (2001) carried out an interpretive qualitative study into teachers' and students' understanding of the term self-directed learning and their views on its value in paediatric intensive care nurse education. Data were collected by means of individual and group interviews with 28 students and eight teachers. All the students were Registered Nurses undertaking a postqualification nursing course in the UK. The findings indicate that both students and teachers had difficulty defining self-directed learning, and that they did not have the same understanding of its nature and purpose. The researcher suggests that this may impact on teachers' and students' overall perceptions of the value of self-directed learning and may in part explain Burnard and Morrison's (1992) finding that teachers are more supportive of student-centred methods than students.

Maturity and stage of education

Several studies indicate a positive response to self-directed learning. An English study by O'Kell (1988) examined the learning preferences of student nurses. A three-part questionnaire was distributed to 158 subjects. Part A consisted of Kolb's (1976) learning style inventory, Part B consisted of Guglielmino's (1977) SDLRS, and Part C contained a list of teaching methods to be ranked in order of preference. The findings indicated that learners became less orientated towards self-directed learning with each successive year of education. This finding is surprising and it would be expected that, as students gained confidence with self-directed learning, they would be more willing to become independent in their studies. It also leads to questioning whether mature students or qualified nurses are less amenable to self-directed learning than traditional students, i.e. those entering nursing direct from secondary education.

Prociuk (1990), in a Canadian study, examined nurses' experiences with and knowledge of self-directed learning. A questionnaire designed to gather information on nurses' knowledge of self-direction and assess their opinions on different methods of learning was administered to 150 Registered Nurses. Following a response rate of 45% ($n = 66$), 81% of respondents reported feeling comfortable with using self-directed learning, with 70% preferring to use it rather than teacher-centred activities. However, 76% of respondents disagreed with the statement that 'All adults are self-directed learners'. The findings are limited to the subjects of the study as the low response rate militates against their generalization.

Thompson and Sheckley (1997) in the USA also conducted a quantitative study to identify whether mature students' teaching preferences differed from those of traditional students. A two-part questionnaire was completed by 206 mature and traditional students, in which they had to rate the frequency with which 41 teaching strategies were used in their best and worst classroom situations. In most cases, mature students' preferences did not vary from those of traditional students. However, mature students who had previous nursing experience did show a preference for structured teaching. These findings are consistent with the view of Slotnick *et al.* (1993) that teaching preferences are not attributable to age itself, but rather to the experiences of the student.

Kell and Van Deursen (2000) conducted a longitudinal study involving physiotherapy degree students in Wales, one aspect of which was to explore the extent to which student maturity influenced self-directed learning. Guglielmino's SDLRS was administered five times throughout their course

and once on completion. The results showed that mature students were more self-directed than others, and the authors suggest that this may be due to previous learning experiences and a greater confidence to control the learning process.

There is a need to conduct research to investigate the skills that mature students have acquired prior to entering nurse education. Grow (1991) contends that self-directed learning may be situational, in that people may be self-directed in some situations and dependent in others. Nevertheless, he contends that self-direction can be taught and fostered by teachers. In order to do this, teachers need to identify their students' orientation towards self-direction. Examining students' self-directed learning readiness can achieve this.

Self-directed learning readiness

The literature supports the view that matching teaching methods with self-directed learning readiness offers the best opportunity for learning (Wiley 1983, O'Kell 1988, Fisher *et al.* 2001). Readiness is defined by Wiley (1983) as:

the degree (to which) the individual possesses the attitudes, abilities and personality characteristics necessary for self-directed learning' (p. 182).

In an American study, Wiley (1983) carried out a controlled experiment to examine the effects of preference for structure and for undertaking a self-directed learning project on self-directed learning. The sample of 104 pre-registration nursing students was divided into an experimental group, who undertook the self-directed learning project, and a control group, who did not. Preference for structure was measured using Ginther's (1974) Reactions to Statement (RTS) questionnaire and self-directed learning readiness was measured using Guglielmino's SDLRS. Data analysis revealed that students who prefer low structure benefit from self-directed learning more than those who prefer high structure.

Similar results were found in an experimental study by Russell (1990), designed to generate information about possible relationships among preference for educational structure, self-directed learning, instructional method and achievement. Forty Registered Nurses completed Ginther's RTS questionnaire and Guglielmino's SDLRS. Both difference and correlational models were used to analyse the data. One of the findings indicated that, as the need for structure becomes greater, readiness for self-directed learning decreases. However, the small sample size means that the findings are not generalizable.

Wiley's (1983) study appears to support the idea that not all adults are self-directed, and that a variety of teaching methods have to be used to meet the learning needs of all students. This is a view shared by Hewitt-Taylor (2002). Similarly, Miflin *et al.* (2000) say that self-direction is an outcome of the cumulative effects of teaching over a full course, resulting from the progressive development of student responsibility for learning and gradual reduction of direct teacher input. Consequently, nurse educators need to identify educational interventions that will develop appropriate skills and attitudes for self-direction.

All of the above studies addressed self-directed learning readiness using Guglielmino's SDLRS. However, several others (Field 1989, Candy 1991, Fisher *et al.* 2001) have cast doubt on the reliability, validity and cost of this tool, which in turn puts the findings of the studies in doubt. As a consequence, Fisher *et al.* (2001) in Australia set out to devise their own questionnaire. They used the Delphi technique with a panel of 11 nurse educators to assess the content and construct validity of a number of items perceived to reflect self-directed learning readiness. They then administered the questionnaire to a convenience sample of 201 undergraduate nursing students. Analysis suggests that the resulting scale is valid and should assist nurse educators in diagnosing learner needs. Further studies are needed to confirm its validity and reliability, and caution is required with the present tools for measuring self-directed learning readiness.

Facilitating self-directed learning

Student-centred approaches to learning, including self-directed learning, challenge the traditional view of the teacher. Townsend (1990) and Spencer and Jordan (1999) suggest that the progression to self-directed learning requires a shift in emphasis from teaching to facilitation. The teacher becomes a facilitator of learning (Townsend 1990, Neary 1997, Hewitt-Taylor 2002, Whitehouse *et al.* 2002) and is no longer the central figure in the teaching and learning process; rather the student becomes central.

The shift from teacher to facilitator is not always readily made, and Knowles (1975) suggests this change requires people to divest themselves of the protective shield of being an authority figure. Similarly, Townsend (1990) considers that some of the skills required of the facilitator should be letting go, allowing student management of the learning process, helping identify learning needs and assessing abilities and student learning.

Studies in other fields suggest that specialist teachers can influence students' self-direction. In a quantitative study involving medical students, Eagle *et al.* (1992) found that groups taught by 'content-expert' tutors produced twice as

many learning issues for self-directed learning as students taught by 'non-content expert' tutors. Similar results were identified by Schmidt *et al.* (1993), who found that medical students taught by experts spent significantly more time on self-directed learning than those taught by non-experts. Dolmans *et al.* (2002) contend that ideally a tutor should be both an expert in the subject being taught and an expert in facilitating learning. This has implications for nurse education, in that it suggests the need for ongoing staff development within their own speciality and also for ensuring that nurses engaged in teaching understand how people learn.

In facilitating self-directed learning, it is well-established that teachers are assisting students in learning how to learn. Rampogus (1988) suggests that learning how to learn is an essential and critical component in the education of student nurses. Kell and Van Deursen (2002) contend that it is the responsibility of educators to ensure that students acquire self-directed learning skills, which can be transferred from their education to the work situation.

The extent to which self-directed learning is implemented as part of a nursing curriculum will vary. It is not feasible to pursue student choice and self-direction to its extreme within the constraints of professional nurse education in which there is pressure to cover content and pass final examinations (Jones 1981, Holmes 1990, Dickelmann 1993). It has been suggested by Nolan and Nolan (1997a) that curriculum constraints have resulted in some teachers of nursing avoiding student-centred methods, while others have embraced them wholeheartedly.

No studies exploring the views of teachers about their facilitating role in self-directed learning were located. In a Canadian study similar to that of Hewitt-Taylor (2001), Lunyk-Child *et al.* (2001) used an interpretive approach to explore faculty and student perceptions of self-directed learning. Data were collected by means of focus group interviews from 47 teachers and 17 student nurses, and content analysis was conducted to identify common themes. Some faculty members, while expressing a commitment to self-directed learning, doubted their abilities to implement it effectively and identified the need for staff development in self-directed learning. Hewitt-Taylor (2001) also found that preparation for and implementation of self-directed learning was problematic, and considers that this may be associated with the lack of a unified definition of self-directed learning. This suggests the importance of teachers of nursing setting the boundaries of self-directed learning from the outset.

Numerous articles were located describing the implementation of self-direction within nursing programmes (Armstrong 1986, DeSilets 1986, Dyck 1986, Hamilton & Gregor 1986, Weinberg & Stone-Griffith 1992, Majumdar

1996, Jenkins *et al.* 1998), but it is beyond the scope of this review to explore each of these individually. All of the documented approaches to self-directed learning appear to involve a number of stages, i.e. assessment – of the environment, readiness for self-direction, learning needs, resources; planning – explaining self-directed learning; implementing and evaluating. These reflect the stages put forward by Knowles (1975) in setting up a student-centred learning environment, i.e. creating a climate for learning, identifying learning needs and learning resources, carrying out the learning activity, evaluating learning and identifying future needs. The above articles were all descriptive in nature, either suggesting ways of developing self-directed learning modules or describing their actual use.

The review indicated that the application of self-directed learning is not without its problems. In self-directed learning, the responsibility for decisions rests with the individual student and the impact of this change in responsibility cannot be underestimated (Iwasiw 1987). Indeed, many authors discussing self-directed learning have identified that students initially experience anxiety and fear about self-directed learning and report the need for an introduction to the concept (Prociuk 1990, Nolan & Nolan 1997b, Miflin *et al.* 2000, Lunyk-Child *et al.* 2001). A co-operative model for its implementation was advanced by Nolan and Nolan (1997b). They suggest that students may find self-directed learning stressful and require support and direction, particularly during the early stages of their course. Lunyk-Child *et al.* (2001), in their study of teachers' and students' perceptions of self-directed learning, found that students undergo a transformation that begins with negative feelings (i.e. confusion, frustration, dissatisfaction) and ends with confidence and skill for self-direction. During this transformation it is the responsibility of teachers to provide learner support.

This support can take the form of instruction in the self-directed learning process. Iwasiw (1987), in discussing the role of nurse teachers in self-directed learning, argues that students should receive a cognitive understanding of the self-directed learning process before they can be expected to engage in it. Indeed, in Prociuk's (1990) study, 61% of respondents agreed with the statement 'In retrospect, I needed an introduction to the self-directed learning process at the beginning of my orientation programme'. This need for instruction was confirmed by Hewitt-Taylor (2001) in her study of self-directed learning in paediatric intensive care nursing, where both students and teachers considered that self-directed learning required some guidelines in order to be successful. This need to be prepared reflects Knowles (1983) acknowledgement that adults may be unused to self-directed learning and may initially find it problematic.

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What is already known about this topic

- Self-directed learning is based on the principles of adult learning, but can take many formats.
- The literature on self-directed learning has focused on describing the development and implementation of self-directed learning modules and much of this research dates from the 1980s.

What this paper adds

- It shows that students and teachers do not have the same understanding of the nature and purpose of self-directed learning, and that it is necessary to identify their respective understandings.
- It recommends that nurse educators need to assess the learning styles and preferences of their students in order to determine the appropriateness of self-directed learning.
- It identifies the need for student support when implementing self-directed learning within a nursing curriculum.
- It reinforces the view that self-directed learning has many benefits, including increased choice, confidence, autonomy, motivation and the development of skills for lifelong learning.

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Benefits of self-directed learning

Numerous benefits to self-directed learning have been reported. However, there is little empirical evidence to substantiate these. Some recent qualitative studies have identified benefits to self-directed learning (Pedley & Arber 1997, Hewitt-Taylor 2001, Lunyk-Child *et al.* 2001).

Hewitt-Taylor (2001) indicates that both students and teachers recognize the value of self-directed learning but does not say what this value is. However, Race (1990) suggests that some of the benefits include the fact that individuals have choice and freedom in what is studied. This is confirmed by Pedley and Arber (1997), who conducted an exploratory qualitative study in the UK using Jarvis' (1992) experiential framework to evaluate a student-centred module of learning. Following a 9-month module of study, a convenience sample of 135 students completed a questionnaire with fixed choice and open-ended questions. This was supplemented by group discussion and feedback. Following descriptive and content analysis, a key theme that emerged was the beneficial learning experience. The reported benefits included more choice, autonomy and taking responsibility. No pilot test was conducted for the questionnaire and questions remain regarding its reliability and validity. The researchers' intentions were to explore an educational development that had many direct and indirect variables, and therefore the findings cannot be transferred to other settings.

In an era of lifelong learning, self-directed learning has vast appeal. Knowles (1980) suggests that 'lifelong education (is) based on the notion that in a world of accelerating change, learning must be a continuing process from birth to death (p. 22).' Self-directed learners appear to be able to transfer learning in terms of both knowledge and study skills from one situation to another (Race 1990). The findings of Lunyk-Child's *et al.* (2001) study also show the perceived advantages of self-directed learning to include developing skills for lifelong learning, increased confidence and autonomy.

Furze (1999) suggests that motivation and self-directedness are intertwined, with motivated students being more self-directed than non-motivated students. One of Knowles' (1975) basic assumptions is that all adults are self-directed. However, Darbyshire (1993) disputes this, claiming that self-direction is a motivational factor which people exhibit to varying degrees. It has also been suggested that motivation to learn is increased as the participant determines where and when self-directed learning occurs (D'A Slevin & Lavery 1991, Weinberg & Stone-Griffith 1992). Jarvis (1987) argued that more research was required into self-directed learning with nursing students, as little was known about them. However, only recently have two studies been published looking at students' perceptions (Lunyk-Child *et al.* 2001) and understanding (Hewitt-Taylor 2001) of self-directed learning.

While several benefits to self-directed learning have been advanced, further studies involving student nurses and nurse educators are required to confirm these in nursing and identify others.

Conclusion

This review has explored the concept of self-directed learning and its use in nurse education. The literature reviewed acknowledges that the concept is poorly defined, although there is a consensus that it is based on the principles of adult education. Self-directed learning can include various activities, and nurses actively engage in self-directed learning. However, a dichotomy exists between the understandings that teachers and students have of the concept.

Not all students are self-directed, and the literature suggests that mature students are more self-directed than those entering nurse education direct from school. Nurse educators need to assess the learning styles and preferences of their students in order to determine the appropriateness of

self-directed learning. It is important to acknowledge that self-directed learning is only one teaching method that can be used to meet the learning needs of all students.

The lack of a common understanding means that implementation of self-directed learning is inconsistent and leads to anxiety for students. In facilitating self-directed learning, it is important to assess readiness for self-directed learning and agree its boundaries. Teachers involved in student-centred approaches to learning become facilitators and must have an understanding of how people learn. This suggests the need for ongoing staff development in this area. Several benefits to self-directed learning have been identified, including increased choice, confidence, autonomy, motivation and the development of skills for lifelong learning. However, further research is required to identify the conditions in which these are most likely to be achieved.

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